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Remarks

Applicant carefully considered the Office Action mailed on October 1, 2003. Claims 1-14 are pending in the present patent application. Of the pending claims, the Examiner rejected claims 1-14. In response to the Office Action, Applicant amended claims 1, 10-11 and 13 to overcome some of the grounds for the 35 U.S.C. §112, second paragraph rejection. No new matter has been added. Applicant requests further examination and reconsideration of the present patent application.

The Examiner noted that there was an objection to the drawings of the present patent application. Applicant submitted formal drawings on May 25, 2001, to the U.S. Patent Office that addressed the objection. Accordingly, Applicant requests that the Examiner reconsider and remove the objection to the drawings.

The Examiner rejected claims 1-14 under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the Examiner submitted that one skilled in the art would not understand what the information generated from the claimed invention means and would not know what to do with the information after it has been generated.

Applicant respectfully traverses the §112, first paragraph, rejection and submits that the specification does provide a written description that would enable one skilled in the art to make and use the claimed invention without undue experimentation. The present patent application relates to Combinatorial Chemistry and more particularly to searching a large experimental space of potential experiments to ascertain small fractions of the space which provide highly reliable outputs as to the solution of an investigation. The present patent application recites claims directed to a hybrid learning system for searching an experimental space and a method for exploring an experimental space using a hybrid learning system. The detailed description of the present patent application provides a written description that is full, clear, concise and exact in its description of the hybrid learning system

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and the functionality performed by the system.   Applicant believes that one of ordinary skill in the art, after reading this description would be able to make and use the claims directed to the hybrid learning system and the functionality performed by the system without enduring undue experimentation.

Applicant believes that the determination of whether one of ordinary skill in the art would be able to make and use the claim invention without enduring undue experimentation is the proper inquiry for ascertaining whether the claimed invention is enabling.   Nevertheless, Applicant submits that one of ordinary skill in the art would understand what the information generated from the claimed invention means and would know what to do with the information after it has been generated. As the present patent application clearly teaches, the claimed invention relates to searching a large experimental space of potential experiments to ascertain small fractions of the space which would provide highly reliable outputs as to the solution of an investigation.   Upon receiving this information, one of ordinary skill in the art would likely want to further investigate these small fractions of the experimental space by actually performing experiments to see what the results would be. Applicant believes that one of ordinary skill in the art would certainly know to take this action if desired, since the present patent application relates generally to Combinatorial Chemistry and more particularly to searching a large experimental space of potential experiments to ascertain small fractions of the space so that one does have to perform experiments on all of the possible combinations for the space.

In light of the above rationale, Applicant submits that the §112, first paragraph, rejection of claims 1-14 is improper. Accordingly, Applicant requests that the Examiner reconsider and remove the §112, first paragraph, rejection of these claims.

The Examiner rejected claims 1-14 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

In one part of the §112, second paragraph, rejection, the Examiner submitted that it is unclear what "selection techniques" are utilized in the claimed invention.

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Applicant respectfully traverses this ground of rejection and submits that the "selection techniques" are clear in its use in the claimed invention. One of ordinary skill in the art would be able to use any one of a variety of selection techniques described on page 7, lines 4-20 in the present patent application. Accordingly, Applicant submits that the claim limitation "selection techniques", when read in light of the specification, provides enough of a degree of precision and particularity that one of ordinary skill in the art would understand the metes and bounds of claim 1.

In another part of the §112, second paragraph, rejection, the Examiner submitted that it is unclear what the "output" in claim 1 represents. Applicant amended this limitation in claim 1 to make it clear what the "output" represents. Accordingly, Applicant submits that claim 1 as now amended is clear as to what the term "output" represents.

Also, in this part of the §112, second paragraph, rejection, the Examiner submitted that clearer claim language is needed with regard to the point at which the repeated process is halted to obtain the final output. Applicant respectfully traverses this ground of rejection and submits that the limitations recited in claim 1 when read in light of the specification, provides enough of a degree of precision and particularity that one of ordinary skill in the art would understand the metes and bounds of when to stop the process.

In still another part of the §112, second paragraph, rejection, the Examiner submitted that claim 4 is vague and indefinite because terms "turnover number (TON)" and "selectivity" are not defined. Applicant respectfully traverses this ground of rejection and submits that "turnover number (TON)" and "selectivity" are well known to people skilled in the art of Combinatorial Chemistry and do not need to be defined.

In a further part of the §112, second paragraph, rejection, the Examiner submitted that claim 10, lines 2-3, is vague and indefinite because it is not clear what the similarity criteria is. Applicant respectfully traverses this ground of rejection and submits that the limitation of "partitioning the experimental space into clusters of points having similarities" is clear in its use in the claimed invention. One of ordinary

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skill in the art would be able to use any one of similarity criteria detailed in the present patent application on page 9, line 2 through page 17, line 16. Accordingly, Applicant submits that the claim limitation of "partitioning the experimental space into clusters of points having similarities", when read in light of the disclosure, provides enough of a degree of precision and particularity that one of ordinary skill in the art would understand the subject matter that claim 10 encompasses and thus does not need to specifically recite similarity criteria.

In another part of the §112, second paragraph, rejection, the Examiner submitted that terms "at least one of actual physical experiments" and "at least actual experiment" in claims 10 and 11 are confusing. Applicant amended claims 10 and 11 to make these terms clearer. Accordingly, Applicant submits that claims 10 and 11 as now amended are clear.

In yet another part of the §112, second paragraph, rejection, the Examiner submitted that the phrase "new improved model" in claim 13 is vague and indefinite. Applicant amended claim 13 to make this claim clearer. Accordingly, Applicant submits that claim 13 as now amended is clear.

In an additional part of the §112, second paragraph, rejection, the Examiner submitted that claims 2 and 7 are incomplete for omitting essential steps. In particular, the Examiner submitted that claims 2 and 7 have omitted steps/procedures by which results are supplied to the data mart. Applicant respectfully traverses this ground of rejection and submits that the present patent application has not described the steps/procedures by which results are supplied to the data mart as essential to the claimed invention. Since the steps/procedures were not described as essential to the claimed invention, Applicant submits that these steps/procedures do not have to be recited in claims 2 and 7.

In still another part of the §112, second paragraph, rejection, the Examiner submitted that the phrase "selection processes" in claim 13 lacks antecedent basis. Applicant amended claim 13 to provide proper antecedent basis.

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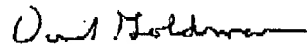Serial No. 09/757,246   RD-27,669

In view of the above, Applicant believes that all grounds of the §112, second paragraph, rejection have been obviated. Accordingly, Applicant requests that the Examiner reconsider and remove the §112, second paragraph, rejection of claims 1-14.

In view of the foregoing remarks and amendments, Applicant requests that the Examiner reconsider this application and allow claims 1-14.

If the Examiner has any questions regarding the present patent application, the Examiner can call Applicant's attorney, David Goldman, at telephone number (518)-387-5927 or (518)-387-5903.

Respectfully submitted,

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